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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,352	03/13/2001	Mirosław Z Bober	204207US2PCT	8286

2292 7590 06/29/2006

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EXAMINER
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DESIRE, GREGORY M

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

**Application No.**

09/786,352

**Applicant(s)**

BOBER, MIROSLAW Z

**Examiner**

Gregory M. Desire

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,6-10 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-10 and 24-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is responsive to communication filed 4/18/06.

#### ***Response to Amendment***

2. The examiner acknowledges canceling claim 11 and adding claim 38. Thus, the objection to claim 11 is moot. Also, the objection to claim 37 is withdrawn. Examiner acknowledges the arguments and amendment to the pending claims. Applicants argument filed in view of 35 USC 103 has been fully considered but they are not persuasive and are thus maintained. See response to arguments below.

#### ***Response to Arguments***

Applicant argues (remarks page 10 lines 20-22 regarding claim 1, page 11 lines 19-21, regarding claim 10, page 12 lines 8-10 regarding claim 28, 31 and 32, page 12 lines 19-21, page 13 lines 6-8 and page 13 lines 13-15) Abassi and Mokhtarian fail to disclose or suggest deriving the eccentricity of the smooth version of the original object outline. This argument is not persuasive because it is the position of the examiner Abassi and Mokhtarian does disclose deriving the eccentricity of the smooth version of the original object outline (Note Abassi et al, page 290-291 paragraph 5 lines 1-15 lines describes additional parameter as eccentricity of CSS image which is shape dependent). Abassi discloses deriving eccentricity of the smooth version of the original object outline. The CSS representation is obtained by smoothing the outline of curve

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shape. Thus, calculating the eccentricity of the CSS representation reads on deriving eccentricity of the smooth version of the original object outline.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6-11 and 24-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbasi et al "Reliable Classification of Chrysanthemum Leaves through Curvature Scale Space" in view of Mokhtarian et al "Robust and Efficient Shape Indexing through Curvature Scale Space".

Regarding method and apparatus claims 1, 10, 24, 28 and 31-36 Abbasi discloses,

Deriving a curvature scale space representation of the object outline by smoothing the object outline (note page 287 paragraph 4 lines 2-12, curvature space representation derived by Gaussian smoothing),

Deriving at least one additional parameter reflecting the shape or mass distribution of a smoothed version of the original curve (note paragraph 4 page 288 lines 10-20 describes shape changing as smoothing of curve occurs, this is based on  $\sigma$  and  $\Gamma$  examiner interprets as parameters), and

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Associating the CSS representation and the additional parameter as shape of the object (note page 291 lines 9-20, CSS and Global parameter (aspect ratio), are associated with shape);

Wherein the at least one additional parameter corresponds to the eccentricity of the outline (note page 290-291 paragraph 5 lines 1-15 lines describes additional parameter as eccentricity which is shape dependent).

Abbasi does not clearly disclose CSS as shape descriptor. Mokhtarian discloses shape descriptors (note paragraph 1.1 page 54 lines 5-7, maxima of CSS contour as shape descriptor). Abbasi and Mokhtarian are combinable because they disclose Curvature Space Scales. At the time of the invention, it would have been to a person of ordinary skill in the art to include shape descriptors in the system of Abbasi as evidenced by Mokhtarian. The suggestion/motivation for doing so would have been using features for shape similarity retrieval (note paragraph 1.1 lines 7-20). Therefore, it would have been obvious to combine Abbasi with Mokhtarian to obtain the claimed inventions.

Regarding method claim 2 Abbasi discloses,

Wherein an additional parameter relates to the smoothed outline corresponding to a peak in the CSS image (note page 291 lines 16-19, aspect ratio describes an additional parameter corresponds to height (peak).

Regarding method claim 3 Abbasi discloses,

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Wherein an additional parameter relates to the smoothed outline corresponding to the highest peak in the CSS image (note page 291 lines 16-19, aspect ratio describes maximum height, thus highest peak).

Regarding method claim 6, Abbasi discloses,

Wherein at least one additional parameter uses a region-based representation (note page 290, paragraph 5 lines 3-4, eccentricity is region based parameter).

Regarding method claims 7, 9 and 11 Abbasi discloses,

Wherein an additional parameter is a region moment invariant (note page 290, paragraph 5 lines 4-7 eccentricity defines region moment).

Regarding method claim 8 Abbasi discloses,

Wherein an additional parameter is based on Fourier descriptor (note page 290, paragraph 4.3, shape descriptor is well known Fourier descriptor).

Regarding apparatus claim 25 Abbasi discloses,

Deriving a representation of an object in an image comprising a control device and storage area (note page 285 lines 10-13, computer system contains storage area and control device).

Regarding apparatus and method claims 26 and 29 Abbasi discloses,

Wherein the storage area is an image database (note page 289, paragraph 4.2 lines 1-2, shape stored in a database)

Regarding apparatus claim 27 Abbasi discloses,

A display (note page 285 lines 10-13, computer system contains storage area, control device and display).

Regarding method claim 30 Abbasi discloses,

Wherein said determining a curvature scale space representation includes determining zero crossing points for an initial set of curves generated to produce said plurality of curves representative of said outline (note page 287-289 paragraph 4 describes zero crossing).

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory M. Desire whose telephone number is (571) 272-7449. The examiner can normally be reached on M-F (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory M. Desire  
Examiner  
Art Unit 2624

G.D.  
June 24, 2006

